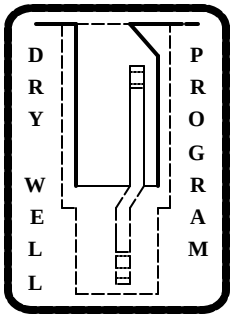
# BEST MANAGEMENT PRACTICES PLAN (B.M.P.P.) GUIDANCE
## FOR DRYWELLS DRAINING AREAS ASSOCIATED WITH INDUSTRIAL ACTIVITIES
## THAT USE, STORE, LOAD OR TREAT HAZARDOUS SUBSTANCES

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## BEST MANAGEMENT PRACTICES PLAN (B.M.P.P.) GUIDANCE FOR DRYWELLS DRAINING AREAS ASSOCIATED WITH INDUSTRIAL ACTIVITIES THAT USE, STORE, LOAD OR TREAT HAZARDOUS SUBSTANCES

### OBJECTIVE

Provide guidance for developing Best Management Practices Plans (BMPPs) in order to minimize the possibility of soil, groundwater or surface water contamination resulting from contaminated runoff draining into drywells and/or basins. Automotive service and fueling facilities, manufacturing facilities, industrial warehouses and other industrial operations that have on-site drywells should implement a BMPP.

### CONTAMINATED WATER FROM FACILITY

Surface runoff drained from vehicular service stations, warehouses storing hazardous or toxic materials, and manufacturing and other industrial processing facilities may drain into drywell(s). Many of the wastes and chemicals generated from or stored at these facilities may be considered hazardous. These wastes/chemicals can pose a significant threat to groundwater quality. Such discharges to drywells are not authorized by federal and state laws. Discharge of any contaminant causing a violation of any Aquifer Water Quality Standard is prohibited under state law. Alternative waste management practices are available that can effectively reduce the threat of groundwater contamination from potentially hazardous or toxic waste or waste constituents. A BMPP should be developed to eliminate contaminants from entering an on-site drywell.

### BEST MANAGEMENT PRACTICES PLAN (BMPP) DEVELOPMENT

A BMPP should begin with good engineering and good housekeeping practices. Under no circumstances, should leaks and spills of fluids containing contaminants flow into drywell drainage areas. If a facility already has an ADEQ approved pollution prevention plan (PPP) and the PPP has addressed all the BMPP concerns, it can serve as the BMPP. A BMPP should generally contain the following information:

### 1. FACILITY PLANS AND DESCRIPTION

Include a general description of the facility operations indicating what and how chemicals are used in each of the operations, and how the wastes are generated from the operation. The facility plans should include surface drainage patterns and identify the location of floor drains, drywells, and chemical and waste storage areas, etc. In developing facility plans for new or remodeled sites, consider the following:

- **U** Locate drywells to prevent unauthorized discharges,

- **U** Analyze drainage areas for potential sources of pollutants,
- **U** If a drywell is located in a retention basin, consider placing preliminary stilling or settling basins upstream, to trap contaminated sediments, and
- **U** Review future modifications at the site prior to implementation to evaluate any potential impacts from on-site operations to soil, groundwater and surface water.

## 2. DESIGN PLANS

Include storm water drainage system design and construction details such as retention/detention basins, drywells and any associated pre-treatment components.

## 3. SPILL CONTAINMENT/CONTROL MEASURES

Include engineering structures used to prevent accidental spills from entering a drywell and/or retention basin. List actions and specific methods that will be utilized to control chemical spills, fluids leaks and wastewaters from each area of operation. Materials collected from clean-up processes should be disposed of according to applicable federal, state, and county/city requirements. Specific considerations include:

- **U** No chemicals should be stored in areas exposed to rainfall where drywells and/or basins receive runoff from industrial/commercial sites,
- **U** No releases of industrial process waters or wastes should be permitted in the drywell and/or basin drainage area,
- **U** Any spill or leak of substances other than "normal urban runoff" in the drywell and/or basin drainage area should be contained, cleaned up and disposed of according to local, state and federal requirements, and
- **U** When parks or other facilities are located within a retention basin, no chemicals or equipment containing pollutants should be stored within the basin or its drainage area.

## 4. WASTE MANAGEMENT PROCEDURES

A housekeeping program should be in place, and should include the following:

- **U** Maintenance of an up-to-date inventory of generated waste and products,
- **U** A waste minimization plan, including a spent solvent recycling/reuse feasibility analysis at sites where solvents are used,
- **U** A method to dispose of all wastes or solvents that are not recycled through companies licensed to handle such materials,
- **U** A pollution prevention plan for waste minimization,
- **U** Collection of waste in approved waste receptacles,
- **U** Established handling procedures for transportation of waste off-site by a certified waste hauler to final destination for disposal, and
- **U** For any operations located within the drainage area of a drywell, methods to prohibit hazardous wastes or other materials that may contribute to the contamination of soil, groundwater or surface water from accumulating in the drainage area.

## 5. OPERATIONAL PRACTICES

The facility should observe the following practices to protect the drywell and ensure that it continues to function properly:

- Frequent inspection of on-site operations to ensure that spills are minimized and waste/chemicals are properly handled,
- Use of toxic/hazardous materials, including but not limited to pesticides, herbicides and fertilizers, within a drywell drainage area should be in accordance with manufacturers' instructions and quantity of application restricted to minimum effective levels,
- Evaluation of non-toxic alternatives for use in lieu of toxic substances where available,
- Removal of sediment accumulations from settling/detention/retention basins and/or drywell chambers as necessary to preserve their operability and capacity, and
- maintenance of drywells according to the manufacturers' recommendations and state guidelines.

## 6. EMPLOYEE TRAINING

The facility should develop and implement a waste management training program that includes spill prevention and specifically addresses how drainage from spill areas will be kept from entering the drywells. The training program should:

- Provide for routine training of new employees and periodic update training for workers who may handle chemicals or wastes,
- Inform employees who work around waste and chemical storage areas of proper procedures to minimize and respond to accidental spills and releases,
- Train employees involved in the application of pesticides, herbicides or fertilizers in the proper application of those substances and the need for special care within basins or areas draining to basins and/or drywells, and
- Train employees responsible for removal and disposal of spilled materials or contaminated sediments concerning the proper methods to handle hazardous materials.

The BMPP including the above details should be maintained at the facility at all times. It should be amended whenever there is a change in facility design, construction, operation or maintenance that has the potential to cause unauthorized discharges of hazardous or toxic pollutants into a drywell and/or retention basin.

## SAMPLING REQUIREMENTS/A.P.P. APPLICATIONS

Pursuant to A.A.C. R18-9-102.A, the Aquifer Protection Permit (APP) program requirements apply to drywells that drain areas where hazardous substances are used, stored, loaded or treated. Facility operators should demonstrate that the storm water drainage facilities do not have the potential to impact aquifer water quality through on-site operations. In order to determine program requirements, facilities may be requested to submit to ADEQ a completed APP Determination of Applicability Form and/or

results of sampling the drywells per the state Drywell Investigation Guidelines.

## ALTERNATIVE DRAINAGE OPTIONS

If an APP is determined to be necessary, the facility operator who will potentially contribute a pollutant to the drywell will submit an APP application for a permit. Drywell owners/ industrial facility operators may choose to eliminate the permit responsibility by closing the drywell and selecting one of the following alternative drainage options.

### 1. IMPERMEABLE SUMP

An impermeable sump with double liners can be built where storm runoff from areas possibly contaminated with hazardous wastes, toxic materials or other contaminants may be routed. The sump should be equipped with a manual pump to enable routine evacuation of uncontaminated storm water to other storm water drainage facilities, including on-site dry wells or retention basins. The BMPP should address how wastewater collected in the sump that is contaminated from a spill or other release will be properly managed.

The drywell that is replaced with a sump should be properly closed according to ADEQ's drywell decommissioning guidelines prior to installation of the sump. The facility should demonstrate clean closure prior to abandonment of the drywell.

### 2. CENTRAL STORM WATER SEWER

If a sewer connection is available, the option for a proper hook up that meets local government requirements should be considered. The operator should follow the monitoring and reporting required by local laws.

## CLOSURE OF EXISTING DRYWELLS

If a facility proposes to close a drywell that has drained areas where hazardous substances are used, stored, loaded or otherwise managed, a closure plan and application must be submitted to ADEQ for approval. If the facility can demonstrate clean closure of the drywell per Arizona Revised Statutes § 49-252, an APP will not be required.

For drywells that have not drained such areas but that have received unauthorized spills, ADEQ may request a closure plan and application that addresses necessary investigation and remediation.

A drywell that has never drained areas where hazardous materials have been managed and has received **only** stormwater discharges may be closed at any time. The owner/operator should follow

ADEQ's Drywell Decommissioning Guidelines and update the drywell registration by reporting to ADEQ that the well has been properly decommissioned.

If there is any question concerning the requirements for closure, please contact the Industrial and Drywell Unit.

**Drywell owners or facility operators can contact the ADEQ Water Permits Section, Industrial and Drywell Unit at (602) 207-4686 to obtain technical guidance and, if necessary, to ensure that all regulatory concerns are addressed. Additional information about the drywell program can also be obtained through the Drywell Hotline at (800) 207-2261, or by accessing our Web site at www.adeq.state.us\environ\water\permits\drywell.html.**